Research Note

NORTHERN ROCKY MOUNTAIN
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1946 - A Peak Year in Pole Production

By

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Production of poles is fast becoming a major forest industry in the Northern Rocky Mountain Region. More than 700,000 poles, valued at nearly $5,000,000, were cut in 1946. This is the highest production ever recorded and is an increase of about 65 percent over the prewar period. Some 800 men were employed in this postwar expansion of the pole industry. Table I shows the number of poles cut by species and states during 1946.

This increase has been accompanied by many changes from previous production trends. Most outstanding has been the expansion in the use of lodgepole pine timber for poles. In 1946 lodgepole pine made up nearly one half of the total pole output, whereas ten years ago the volume of this species was less than two percent of the total. With the increase in output the center of pole production shifted from Idaho to Montana. Prior to World War II pole production in Montana was relatively small, less than 5,000 pieces in 1937. However, with lodgepole pine emerging as a widely accepted pole species, Montana moved into first place in the region as a producing state, in 1946 cutting over 300,000 poles.

Table I.

Number of Poles Produced in 1946

Species	Northern Rocky Mountain Region				Percent of Total
	Montana	N Idaho	NE Washington	Total	
	No. of Poles				Percent
Lodgepole pine	265,877	37,097	37,074	340,048	47.9
Western redcedar	8,769	163,503	73,038	245,310	34.5
Western larch	26,476	46,810	38,254	111,540	15.7
Douglas-fir	-	5,419	7,000	12,419	1.8
Ponderosa pine	200	21	533	754	.1
Western white pine	-	390	-	390	-
Total	301,322	253,240	155,899	710,461	-
Percent	42.4	35.7	21.9		100.0

The 1946 cut of 245,000 cedar poles compares favorably with the 210,000 poles which it is estimated could be cut under good forestry practices. This near balance, however, has come about through a sizeable curtailment in cedar-pole cutting. Ten years ago 98 percent of all the poles produced in the region were cedar, whereas in 1946 they made up only 34 percent of the total. In the same period the output dropped from 426,000 to 245,000 pieces. North Idaho, nevertheless, remains the center of the cedar-pole industry. About two thirds of the cedar poles came from this state in 1946; Northeast Washington was second with 30 percent.

Western larch, a relatively new species in the pole market, moved into a prominent place. Nearly 112,000 pieces were cut last year. Production was greatest in North Idaho. In both Montana and Northeast Washington, on the basis of the number of poles cut, western larch was the second most important species. Production of larch poles increased rapidly in the latter part of 1946.

Table II shows the distribution of the 1946 pole production by A. S. A. (American Standards Association) classes 1/. In lodgepole pine, pole classes 6 and 7 accounted for 90 percent of the pieces. In western redcedar the two most popular classes were 4 and 5. In larch, Douglas-fir, and ponderosa and white pines, class 6 was the outstanding item. In larch, although data for the year indicate the smaller sizes were in greater number, there was a marked shift during the latter part of the year to the larger sizes. Western redcedar remains, nevertheless, the principal source of large poles, the 45-foot class 4 cedar pole being the most common. For all species combined 50 percent of the poles were in the 35-foot length group.

Three factors largely explain why pole production in the Northern Rocky Mountain states increased so rapidly: An unprecedented Nation-wide demand for poles, a plentiful timber supply of the acceptable pole species, and the initiative of private industry in expanding plant facilities and logging operations. For nearly five years during World War II pole replacements lagged. Production was low. In addition REA (Rural Electrification Admin.) initiated a new line construction program which called for nearly 3,000,000 poles annually, 250,000 poles alone for the Rocky Mountain states. These factors combined resulted in an unprecedented demand in the postwar period.

To satisfy this demand it was necessary to develop new timber areas and to push production of the less-used but acceptable pole species -- lodge-pole pine, western larch, and Douglas-fir. The Northern Rocky Mountain Region was one place where these species were to be found on large areas and in sufficient volumes to interest the pole industry. It is estimated that there are more than 200 million trees of pole quality which could be cut. Lodgepole pine and Douglas-fir make up about three quarters of this number.

1/ Table IV, page 5, summarizes by species the length and diameter specifications for A. S. A. pole classes.

Table II.

Distribution of 1946 Pole Production by A.S.A. Classes, Length, and Species
Northern Rocky Mountain Region 1/

ASA 2/ Classes	Length of Poles - Feet: 20 & less	25	30	35	40	45 & up	All	Percent of total
	Number of Poles							Percent
Lodgepole Pine								
3	-	26	26	21	13	29	115	-
4	-	58	435	296	236	1,722	2,747	.8
5	-	374	431	6,623	5,704	6,682	19,814	5.9
6	-	848	9,683	161,419	15,194	2,719	189,863	55.9
7	-	5,408	73,989	37,608	1,403	1	118,409	34.8
8	2,338	4,310	664	469	-	-	7,781	2.3
9	831	-	-	-	-	-	831	.2
10	488	-	-	-	-	-	488	.1
Total	3,657	11,024	85,228	206,436	22,550	11,153	340,048	-
Percent:	1.1	3.2	25.1	60.7	6.6	3.3	-	100.0
Western Redcedar								
4	-	-	-	-	-	109,692	109,692	44.7
5	-	-	-	-	86,519	7,000	93,519	38.2
6	-	-	908	41,073	-	-	41,981	17.1
7	-	-	118	-	-	-	118	-
Total	-	-	1,026	41,073	86,519	116,692	245,310	-
Percent:	-	-	.4	16.7	35.3	47.6	-	100.0
Western Larch								
6	-	-	-	85,580	-	-	85,580	76.7
7	-	-	5,928	11,532	-	-	17,460	15.7
8	8,500	-	-	-	-	-	8,500	7.6
Total	8,500	-	5,928	97,112	-	-	111,540	-
Percent:	7.6	-	5.3	87.1	-	-	-	100.0
Douglas-Fir								
6	-	-	-	10,871	472	-	11,343	91.3
7	-	-	338	738	-	-	1,076	8.7
Total	-	-	338	11,609	472	-	12,419	-
Percent:	-	-	2.7	93.5	3.8	-	-	100.0
Ponderosa and White Pine								
6	-	-	-	944	-	-	944	82.5
7	-	-	-	200	-	-	200	17.5
Total	-	-	-	1,144	-	-	1,144	-
Percent:	-	-	-	100.0	-	-	-	100.0
All Species								
3	-	26	26	21	13	29	115	-
4	-	58	435	296	236	111,414	112,439	15.8
5	-	374	431	6,623	92,223	13,682	113,333	16.0
6	-	848	10,591	299,887	15,666	2,719	329,711	46.4
7	-	5,408	80,373	50,078	1,403	1	137,263	19.3
8	10,838	4,310	664	469	-	-	16,281	2.3
9	831	-	-	-	-	-	831	.1
10	488	-	-	-	-	-	488	.1
Total	12,157	11,024	92,520	357,374	109,541	127,845	710,461	-
Percent:	1.7	1.6	13.0	50.3	15.4	18.0	-	100.0

1/ Northeastern Washington, North Idaho, and Montana.

2/ American Standards Association. Length and diameter specifications for classes given in Table IV.

Table III shows the number of poles by species which it is estimated are to be found in this region on commercial forest land, the number cut in 1946, and the number which could be cut annually in the future if reasonably intensive forest practices are followed.

Table III.

Estimated Number of Poles in Timber Stands and Possible Future Cut

Species	In Inventory of: Existing Stands	Cut in 1946	Possible Annual Cut Under Good Forestry Practices
	No. of Poles - Thousand		
Lodgepole pine	68,000	340	1,440
Douglas-fir	60,000	12	870
Western larch	35,000	112	336
Cedar	11,135	245	210
Ponderosa pine	19,200	1	54
True firs	10,380	-	83
Engelmann spruce	3,310	-	22
Western hemlock	2,400	-	37
Total	209,425	710	3,052

On the basis of existing timber stands, the chances for maintaining the 1946 cut and for expanding it are good. If cutting is done in accordance with good forest practices production of all species, except cedar, can be stepped up. The greatest opportunity is in lodgepole pine where the 1946 cut could be exceeded by over one million poles. With cedar, though, cutting can only continue at about the current level if future production is not to be curtailed because of the lack of standing timber. If, however, good forestry practices are not followed and if other timber uses make inroads on the timber supply, the long-time outlook for expanding pole production beyond the 1946 cut is not so encouraging. Use of pole timber for sawlogs, for pulpwood, and for other purposes, plus depletion resulting from insect infestations and fire, may cut into the potential supply of timber for poles.

A major difficulty that will be encountered in further expanding pole operations will be the inaccessibility of much of the remaining timber. This is especially so in lodgepole pine which is frequently found at high altitudes and on undeveloped areas. Without a road program which makes commercial forest land readily accessible, it will not be economically feasible to practice intensive forestry. Another important factor which will affect the future of the pole industry will be the extent to which high standards are maintained for poles shipped from this region. Rigid inspection of trees selected and poles shipped will be required.

Table IV.

Length-Diameter Specifications For A.S.A. Pole Classes 1/

Length of Pole	Species	A.S.A. Class 1	2	3	4	5	6	7	8	9	10
		Minimum Diameter at Top Inside Bark - Inches									
		8.6	8.0	7.3	6.7	6.1	5.4	4.8	5.7	4.8	3.8
Feet		Minimum Diameter Six Feet From Butt - Inches									
16	LLP	-	-	-	-	7.0	6.5	6.0	No butt requirement.		
	DF&L	-	-	-	-	6.8	6.2	5.7	"	"	"
	P&WP	-	-	-	-	7.2	6.7	6.2	"	"	"
	WRC	-	-	-	-	7.3	6.8	6.2	"	"	"
20	LPP	10.3	9.7	9.1	8.4	7.8	7.2	6.7	No butt requirement.		
	DF&L	10.0	9.4	8.8	8.1	7.5	7.0	6.4	"	"	"
	P&WP	10.7	10.0	9.4	8.6	8.0	7.3	6.8	"	"	"
	WRC	11.0	10.2	9.5	8.9	8.1	7.5	7.0	"	"	"
25	LPP	11.5	10.7	9.9	9.2	8.6	8.0	7.3	No butt requirement.		
	DF&L	11.0	10.3	9.5	8.9	8.3	7.6	7.0	"	"	"
	P&WP	11.8	11.0	10.3	9.5	8.9	8.1	7.6	"	"	"
	WRC	12.1	11.3	10.5	9.7	9.1	8.3	7.8	"	"	"
30	LPP	12.4	11.6	10.8	10.0	9.2	8.6	8.0	No butt requirement.		
	DF&L	11.9	11.1	10.3	9.5	8.9	8.3	7.6	"	"	"
	P&WP	12.7	11.9	11.1	10.3	9.5	8.9	8.3	"	"	"
	WRC	13.1	12.3	11.3	10.5	9.7	9.1	8.4	"	"	"
35	LPP	13.2	12.3	11.5	10.7	9.9	9.1	8.4	No butt requirement.		
	DF&L	12.7	11.9	11.1	10.2	9.5	8.8	8.1	"	"	"
	P&WP	13.5	12.7	11.9	11.0	10.2	9.5	8.8	"	"	"
	WRC	13.8	13.1	12.1	11.3	10.3	9.7	8.9	"	"	"
40	LPP	14.0	13.1	12.1	11.3	10.5	9.7	8.9	No butt requirement.		
	DF&L	13.4	12.6	11.8	10.8	10.0	9.2	8.6	"	"	"
	P&WP	14.3	13.5	12.6	11.6	10.8	10.0	9.4	"	"	"
	WRC	14.6	13.8	12.9	11.9	11.0	10.2	-	"	"	"
45	LPP	14.6	13.7	12.7	11.8	11.0	10.2	9.4	No butt requirement.		
	DF&L	14.0	13.2	12.3	11.5	10.5	9.7	9.1	"	"	"
	P&WP	15.1	14.2	13.2	12.3	11.5	10.5	9.9	"	"	"
	WRC	15.4	14.5	13.5	12.6	11.6	-	-	"	"	"
50	LPP	15.3	14.3	13.4	12.4	11.5	10.7	9.9	No butt requirement.		
	DF&L	14.6	13.7	12.7	11.9	11.0	10.2	9.4	"	"	"
	P&WP	15.8	14.8	13.8	12.7	11.9	11.0	10.2	"	"	"
	WRC	16.1	15.1	14.2	13.1	12.1	-	-	"	"	"

1/ Specifications as approved by American Standards Association:
LPP - Lodgepole pine, March 14, 1941.
DF&L- Douglas-fir and western larch, November 30, 1945.
P&WP- Ponderosa and white pine, November 30, 1945.
WRC - Western redcedar, March 14, 1941.